

AN 1988:640833 CAPLUS
 DN 109:240833
 ED Entered STN: 24 Dec 1988
 TI Cyclopentylene compounds for **liquid-crystal** phases
 used in electrooptical display devices
 IN Krause, Joachim; Waechtler, Andreas; Scheuble, Bernhard; Weber, Georg
 PA Merck Patent G.m.b.H., Fed. Rep. Ger.
 SO Ger. Offen., 14 pp.
 CODEN: GWXXBX
 DT Patent
 LA German
 IC ICM C07C069-74
 ICS C07C069-773; C07C043-21; C09K019-30; G02F001-13
 CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other
 Reprographic Processes)
 Section cross-reference(s): 24, 75

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3739588	A1	19880728	DE 1987-3739588	19871123
	JP 63179835	A2	19880723	JP 1987-319189	19871218
	US 4873019	A	19891010	US 1987-135103	19871218
PRAI	DE 1986-3643795		19861220		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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DE 3739588	ICM	C07C069-74
	ICS	C07C069-773; C07C043-21; C09K019-30; G02F001-13

AB The compds. have the general formula R1A1Z1A2(Z2A3)nR2, where R1, R2 = C1-15 alkyl, wherein ≥ 1 non-neighboring CH2 groups can be replaced by O, CO, OCO, OCOO, CH-halogen, CHCN, and/or CH:CH, and 1 of R1 and R2 can also be F, Cl, Br, CN, COOH, OH, SH, NH2, NO2, or NCS; Z1, Z2 = COO, OCO, CH2CH2, CH2O, OCH2, N:N, NO:N, CH:N, or a single bond, and 1 of Z1 and Z2 can also be CH2, O, CO, CHCN, CH-halogen, CH2CH2CH2, CH2COO, or CH2OCO; A1,A2,A3 = unsubstituted or singly or multiply halogen-, nitrile-, and/or alkyl-substituted 1,4-phenylene in which ≥ 1 CH group can be replaced by N, 1,4-cyclohexylene or 1,3-cyclopentylene in which 1 or 2 non-neighboring CH2 groups can be replaced by O and/or S, 1,4-bicyclo[2.2.2]octylene, piperidin-1,4-diyl, naphthalen-2,6-diyl, decahydronaphthalen-2,6-diyl, or 1,2,3,4-tetrahydronaphthalen-2,6-diyl (≥ 1 of A1, A2, and A3 = 1,3-cyclopentylene as defined above); and n = 0-3. 4-(trans-3-Propylcyclopentyl)benzoic acid 4-octylphenyl ester, m. p. 36° and having clear point 40.7°, was prepared from 4-n-octylphenol and 4-(trans-3-propylcyclopentyl)benzoyl chloride.

ST cyclopentylene compd **liq crystal**; electrooptical display **liq crystal** cyclopentylene compd

IT **Liquid crystals**

(cyclopentylene derivs.)

IT Optical imaging devices

(electro-, **liq.-crystal**, cyclopentylene derivs. for)

IT 117694-66-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and reaction of, in formation of **liq.-crystal** cyclopentylene derivs.)

IT 117694-58-3P 117694-59-4P 117694-60-7P 117694-61-8P
 117694-62-9P

RL: PREP (Preparation)

(preparation of, for **liq.-crystal** phases in electrooptical display devices)

IT 1806-26-4 59748-39-9 81936-33-6 82322-93-8 88581-00-4
 117694-61-8 117694-63-0 117694-64-1 117694-65-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, in formation of liq.-crystal
cyclopentylene derivs.)

IT 117694-60-7P 117694-61-8P

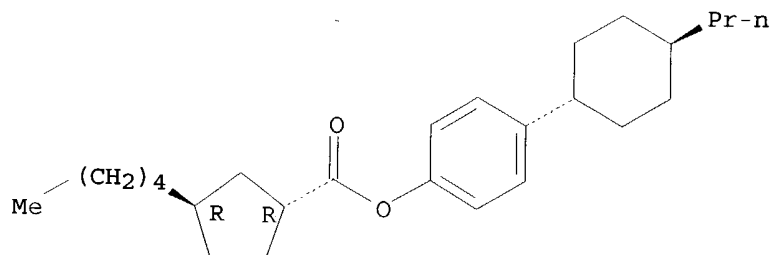
RL: PREP (Preparation)

(preparation of, for liq.-crystal phases in
electrooptical display devices)

RN 117694-60-7 CAPLUS

CN Cyclopentanecarboxylic acid, 3-pentyl-, 4-(4-propylcyclohexyl)phenyl
ester, [1 α (trans),3 β]- (9CI) (CA INDEX NAME)

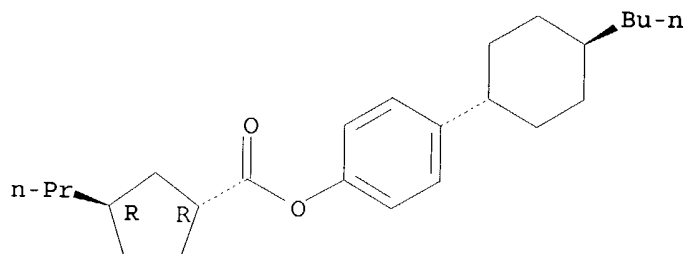
Relative stereochemistry.



RN 117694-61-8 CAPLUS

CN Cyclopentanecarboxylic acid, 3-propyl-, 4-(4-butylcyclohexyl)phenyl ester,
[1 α (trans),3 β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.



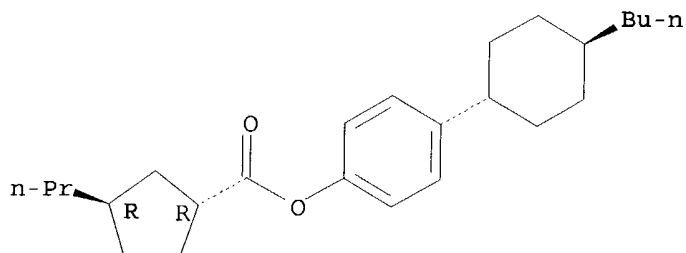
IT 117694-61-8

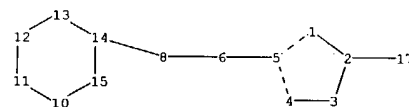
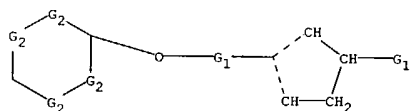
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in formation of liq.-crystal
cyclopentylene derivs.)

RN 117694-61-8 CAPLUS

CN Cyclopentanecarboxylic acid, 3-propyl-, 4-(4-butylcyclohexyl)phenyl ester,
[1 α (trans),3 β]- (9CI) (CA INDEX NAME)

Relative stereochemistry.





chain nodes :

6 8 17

ring nodes :

1 2 3 4 5 10 11 12 13 14 15

chain bonds :

2-17 5-6 6-8 8-14

ring bonds :

1-2 1-5 2-3 3-4 4-5 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

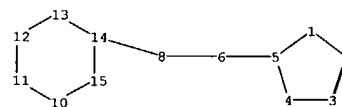
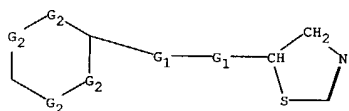
1-2 1-5 2-3 2-17 3-4 4-5 5-6 6-8 8-14 10-11 10-15 11-12 12-13
13-14 14-15

G1:C,O

G2:C,O,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:CLASS 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 17:CLASS



chain nodes :

6 8

ring nodes :

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chain bonds :

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ring bonds :

1-2 1-5 2-3 3-4 4-5 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

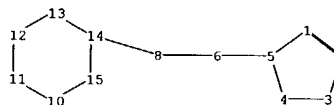
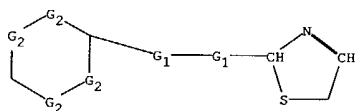
1-2 1-5 2-3 3-4 4-5 5-6 6-8 8-14 10-11 10-15 11-12 12-13 13-14 14-15

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chain nodes :

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ring nodes :

1 2 3 4 5 10 11 12 13 14 15

chain bonds :

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ring bonds :

1-2 1-5 2-3 3-4 4-5 10-11 10-15 11-12 12-13 13-14 14-15

exact/norm bonds :

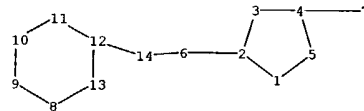
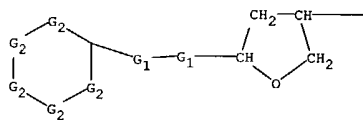
1-2 1-5 2-3 3-4 4-5 5-6 6-8 8-14 10-11 10-15 11-12 12-13 13-14 14-15

G1:C,O

G2:C,O,N

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:CLASS 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom



chain nodes :

6 7 14

ring nodes :

1 2 3 4 5 8 9 10 11 12 13

chain bonds :

2-6 4-7 6-14 12-14

ring bonds :

1-2 1-5 2-3 3-4 4-5 8-9 8-13 9-10 10-11 11-12 12-13

exact/norm bonds :

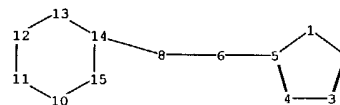
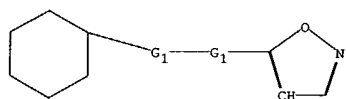
1-2 1-5 2-3 2-6 3-4 4-5 4-7 6-14 8-9 8-13 9-10 10-11 11-12
12-13 12-14

G1:C,O

G2:C,O,N,Si

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 7:CLASS 8:Atom 9:Atom
10:Atom 11:Atom 12:Atom 13:Atom 14:CLASS



chain nodes :

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ring nodes :

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chain bonds :

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exact/norm bonds :

1-2 1-5 2-3 3-4 4-5 5-6 6-8 8-14 10-11 10-15 11-12 12-13 13-14 14-15

G1:C,O

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:CLASS 8:CLASS 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom